

# **Decision Support Software - ORNL**

## **February 18, 1998**

### Decision Support Software

As part of the Environmental Technology Verification program, the U. S. Environmental Protection Agency, in collaboration with the U. S. Department of Energy, is working to test and verify the performance of environmental decision support software (DSS) packages. Decision support software integrates environmental data and simulation models into a framework for making site characterization, monitoring, and cleanup decisions, (e.g. where to sample, cost/benefit analysis of additional or reduced sampling, human and ecological risk analysis, etc.). An effective DSS package should integrate, analyze, and present environmental information to assist a project manager in developing a cost-effective, defensible, cleanup/monitoring strategy.

A number of software developers have marketed a variety of programs which manage and present information about a site. This data can be used to assist and guide the environmental decision maker in a number of ways. The EPA Regions, several EPA Program Offices, and other Federal Agencies have expressed interest in the performance and potential applications of these programs when tested under real-world situations. To accomplish this goal, a testing and verification program is being developed. A number of well-characterized sites will be selected as reference points against which the performance of each technology will be measured. The developers will be given information on the site history and target compound list. Analytical data from a limited number of sampling points will be provided and where available, physical parameters such as groundwater flow rates and site characterization data will be provided. The developers will be expected to proceed iteratively to predict the location and number of additional sampling points required to describe the contaminant plume with enough confidence to support engineering decisions such as a remedial action plan or a long-term monitoring plan.

In order to establish communication with the potential participants, an informational meeting will be held on February 18, 1998 at the EPA Region 9 Headquarters in San Francisco. Interested parties should contact one of the individuals listed below to qualify for an invitation to this meeting. Based on the selection criteria and information presented at this meeting, developers may be invited to participate in the performance verification test scheduled to be conducted at Oak Ridge, TN in the summer of 1998.

The primary outcome of this exercise will be a verification report for each technology which will assess the performance of the software in supporting environmental decisions. A draft of the experimental design and the technology selection criteria are being

developed and will be provided as part of the invitation package.

This testing and verification program will be coordinated by Oak Ridge and Brookhaven National Laboratories. For more information on the technical aspects of this program, please contact Terry Sullivan (phone 516-344-2840; email: [sullivan1@bnl.gov](mailto:sullivan1@bnl.gov)). For information on this and other projects in the Environmental Technology Verification program, please contact Steve Billets (phone 702-798-2232; email: [Billets-Stephen@epamail.epa.gov](mailto:Billets-Stephen@epamail.epa.gov)).